NAS Performance, Traffic Trends, OEP Status & Look Ahead

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General Manager

Special Thanks To: Tom Berry, Gregg Nelson, Lee Brown, Ken Lamon, Dan Brudnicki, Randy McGuire, Elvan McMillen, Graham Glover

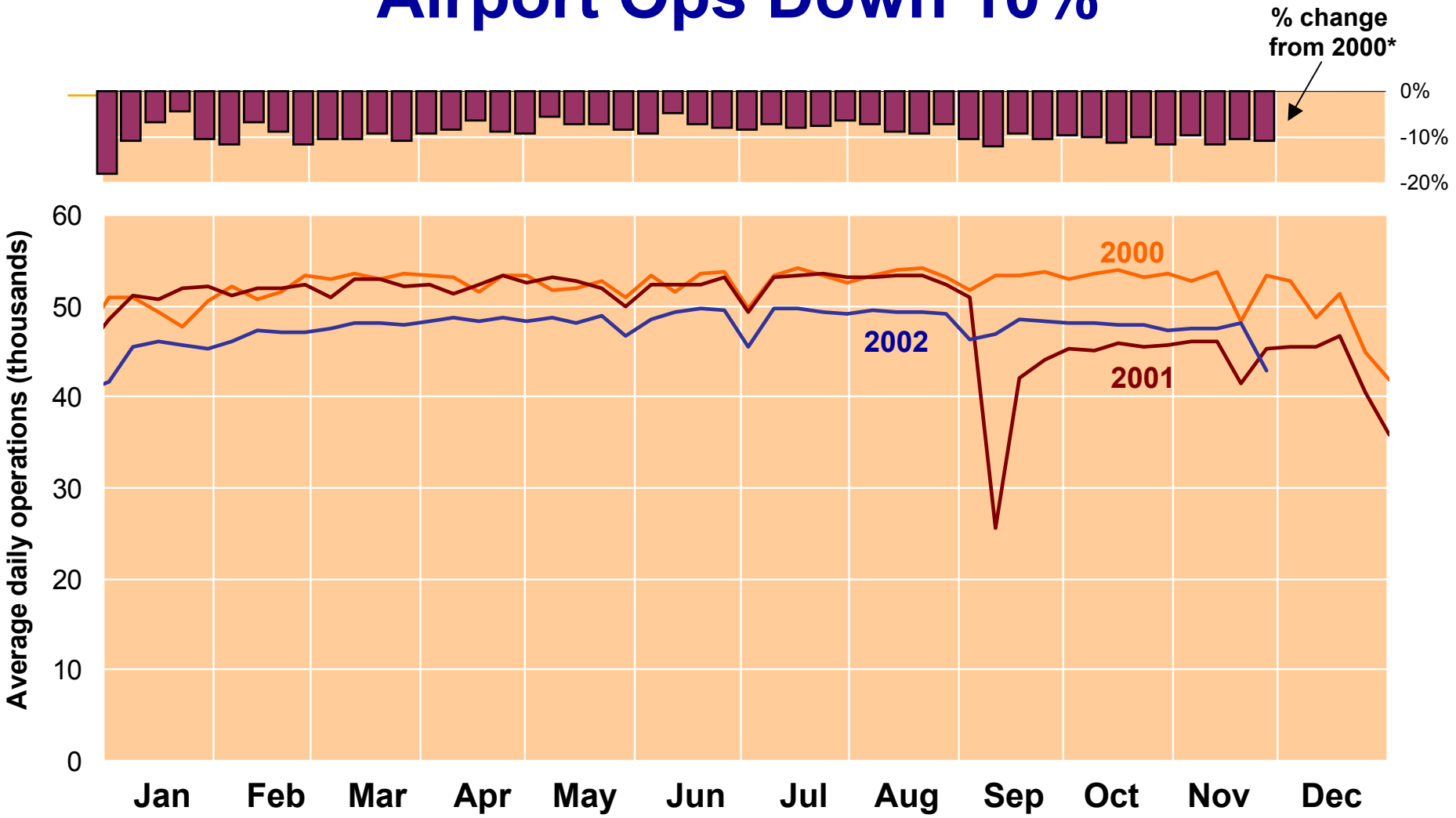
9 December 2002

Presentation for Industry Day

Agenda

- NAS Performance and Traffic Trends
- Status of the OEP Version 4.0 (12/01)
- Emphasis for OEP Version 5.0 (12/02)

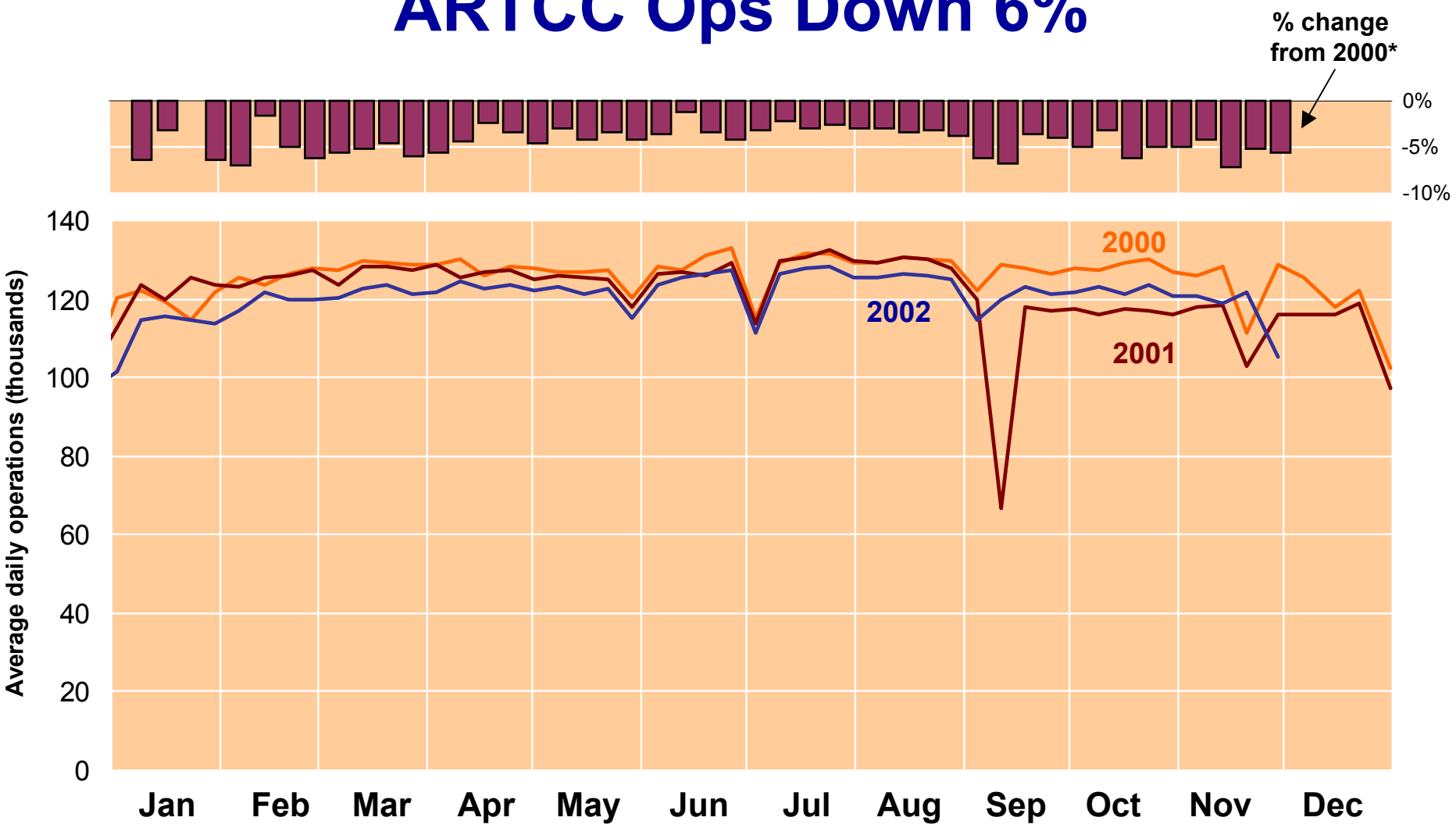
Airport Ops Down 10%



Weekly average OPSNET (45 airports)
*Nov 17-30 compared to one week earlier 2000

Prepared by Ken Lamon

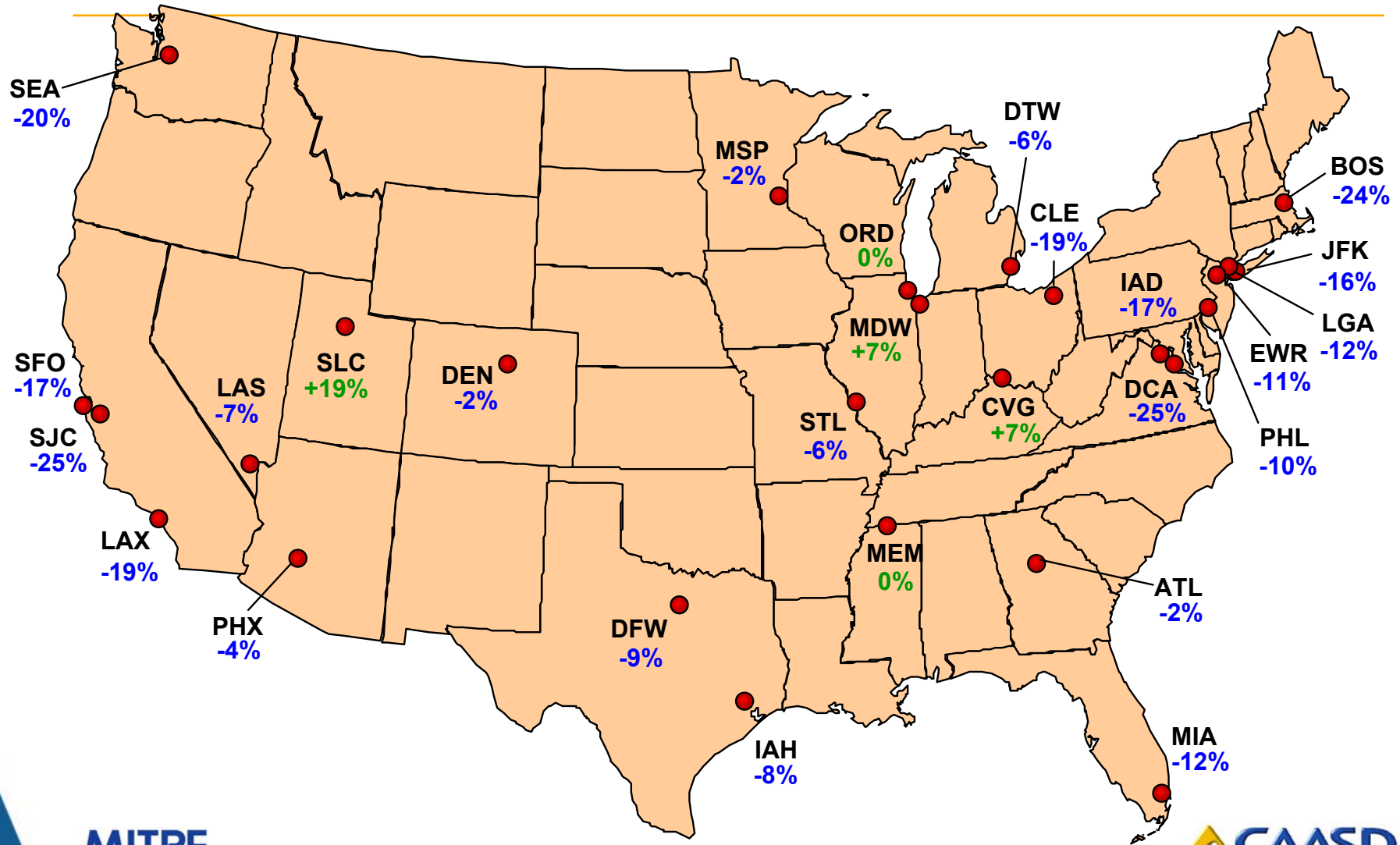
ARTCC Ops Down 6%



Weekly average, OPSNET
*Nov 17-30 compared to one week earlier 2000

Change in Weekday Operations by Major Airport

Nov 2002 vs. Nov 2000



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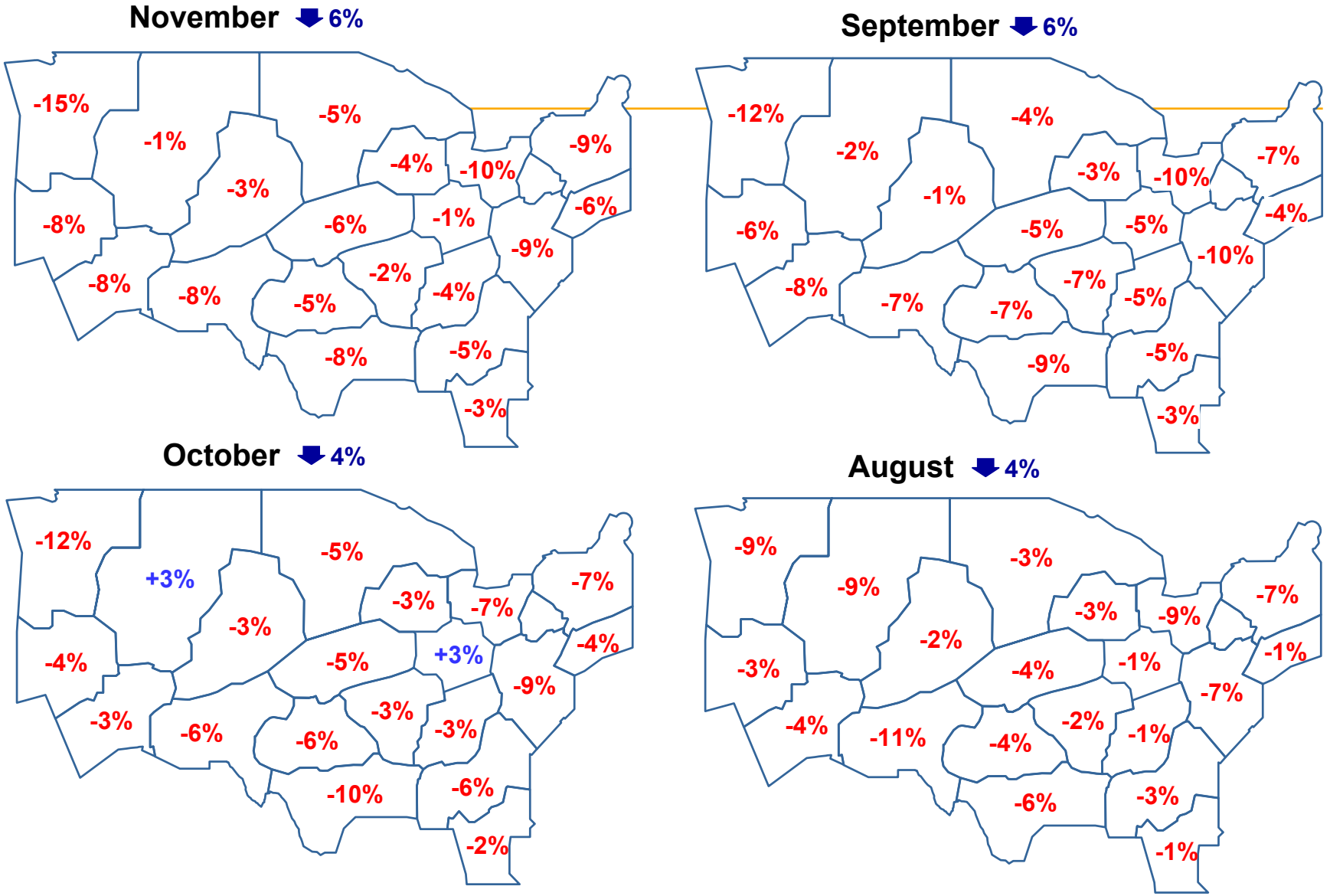
OPSNET

ARTCC Ops: Change from Same Month in 2000



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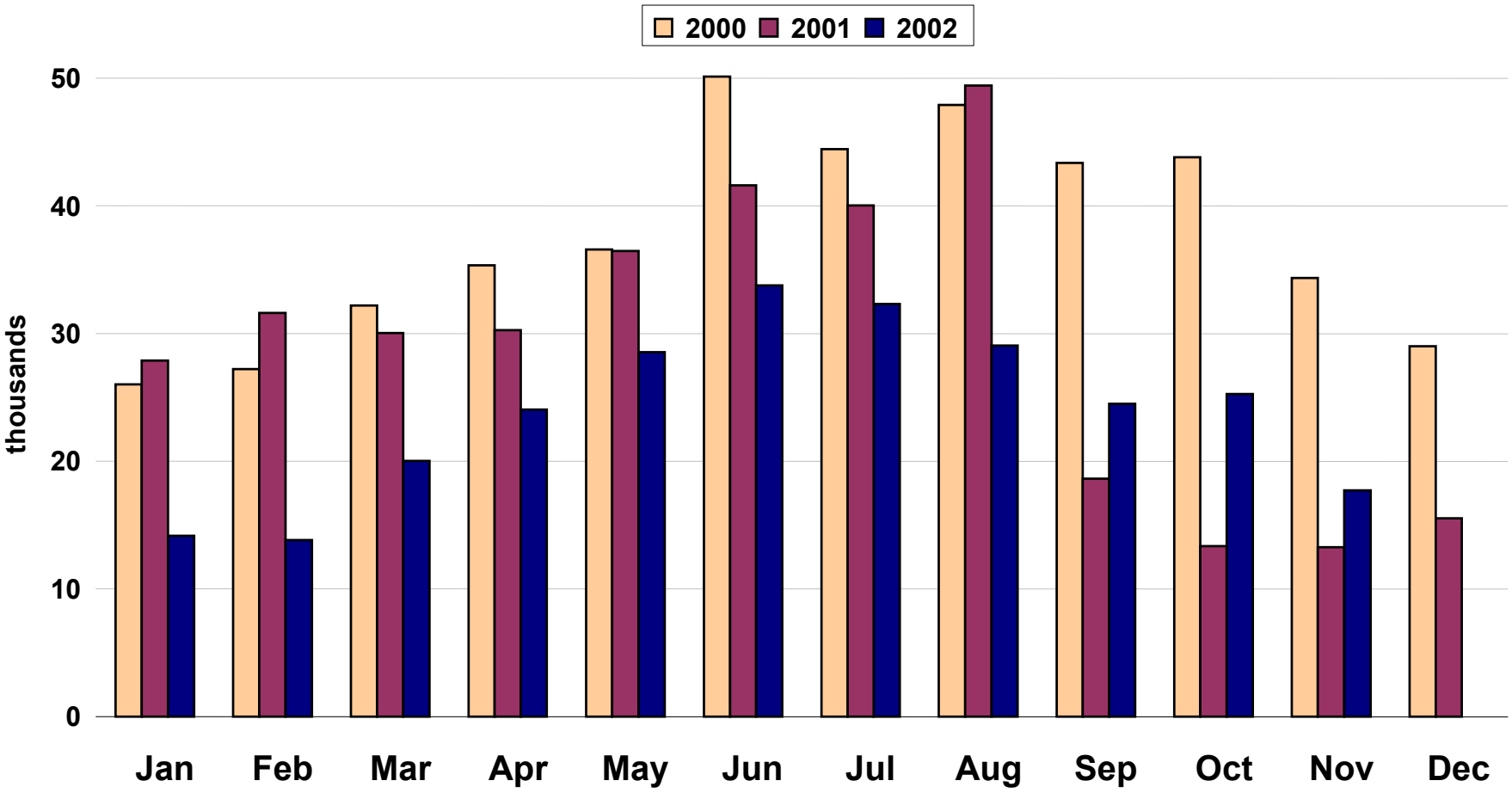
OPSNET, weekdays

Air Traffic Delays



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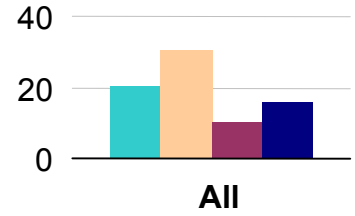
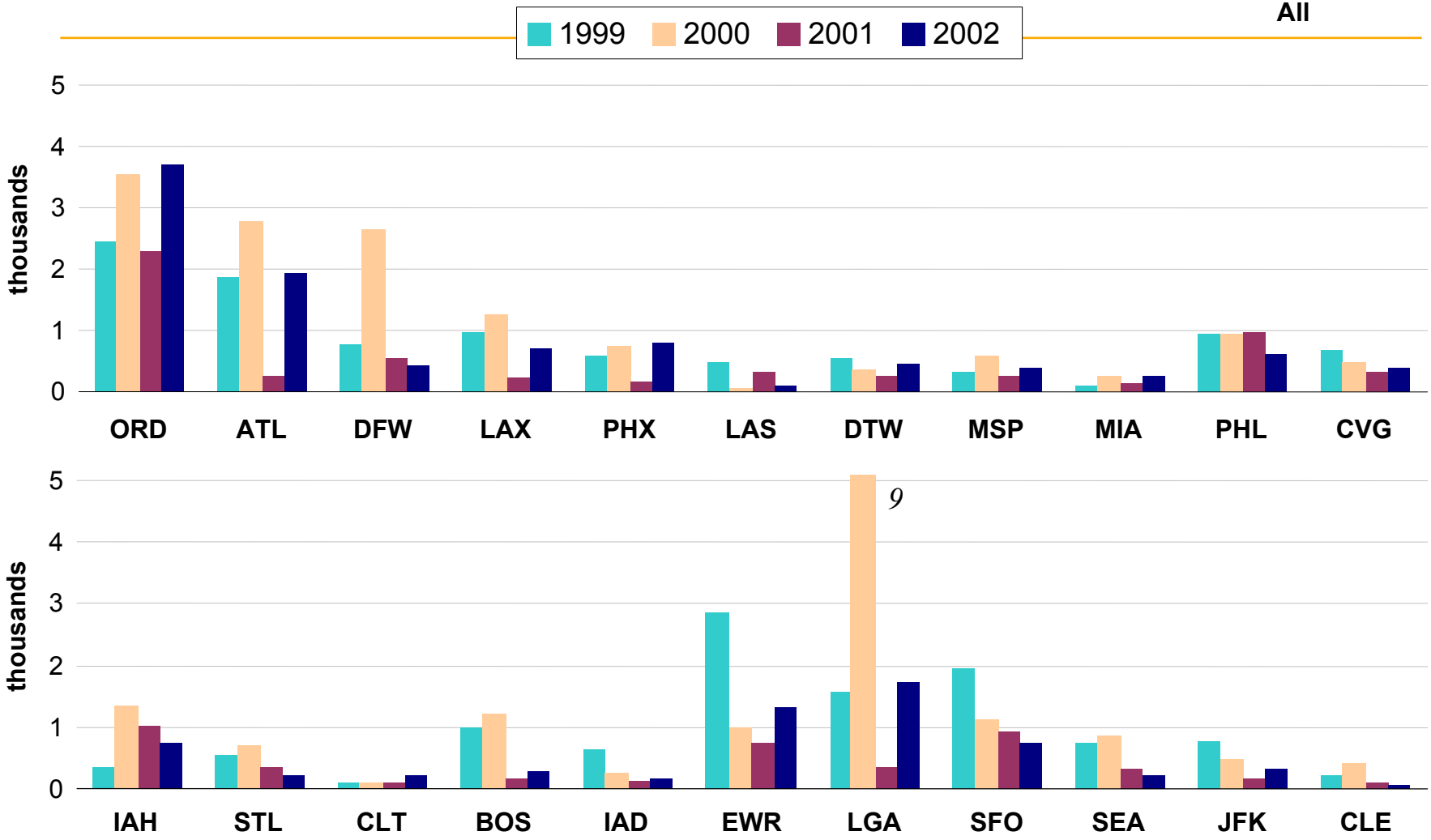
OPSNET, All facilities

November Delays





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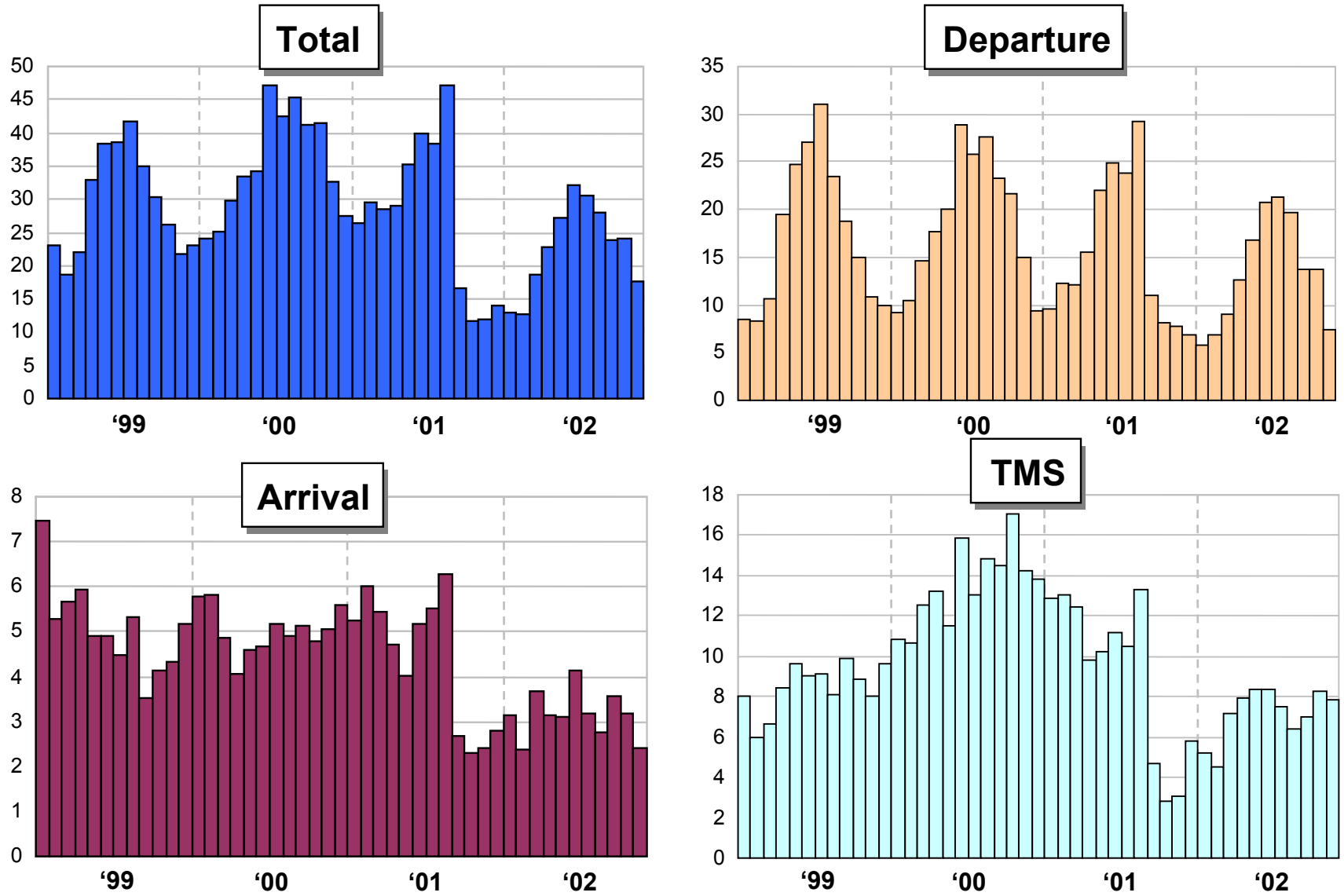
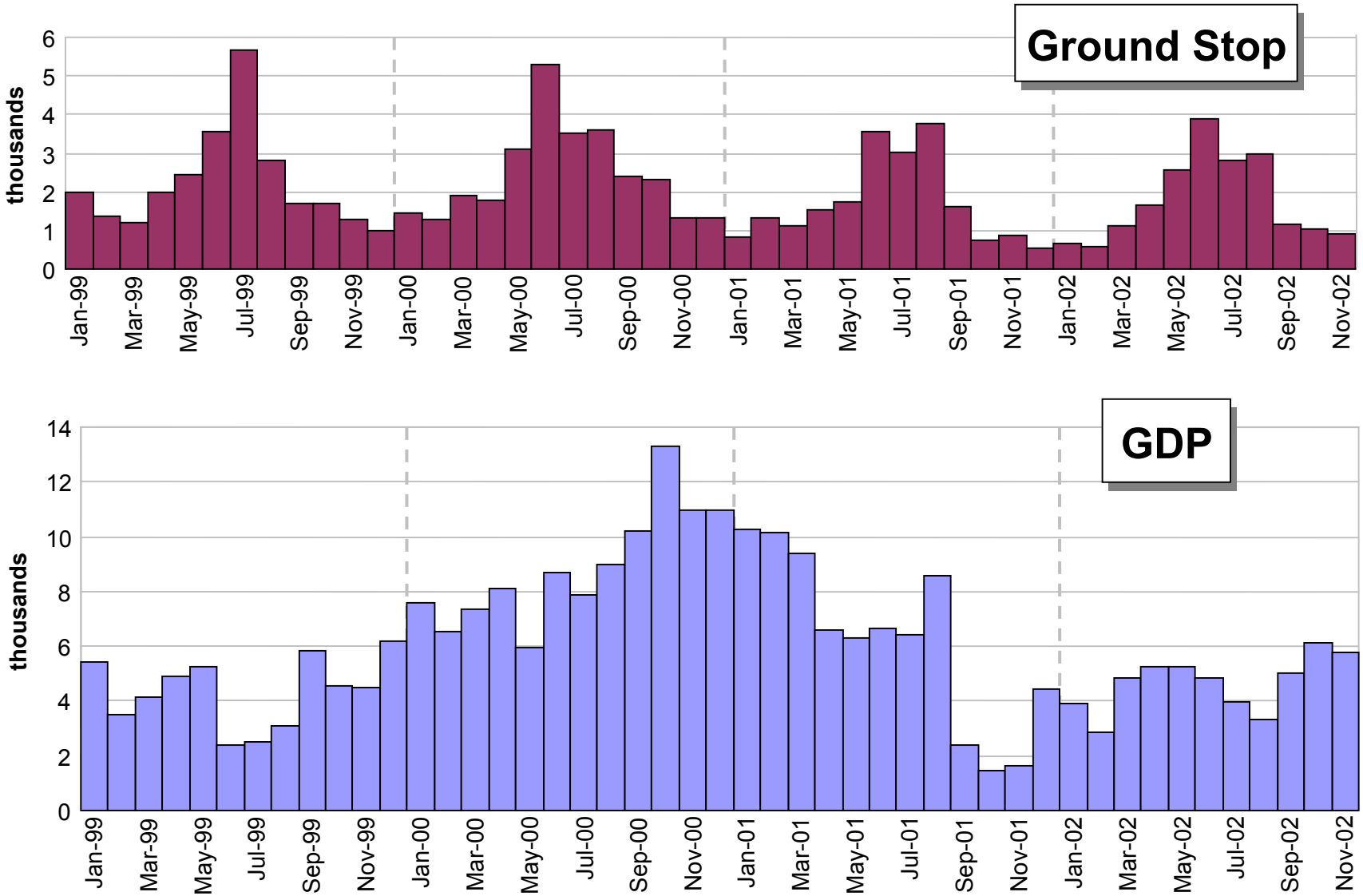
OPSNET, Ordered by busiest airport

Delays by Category

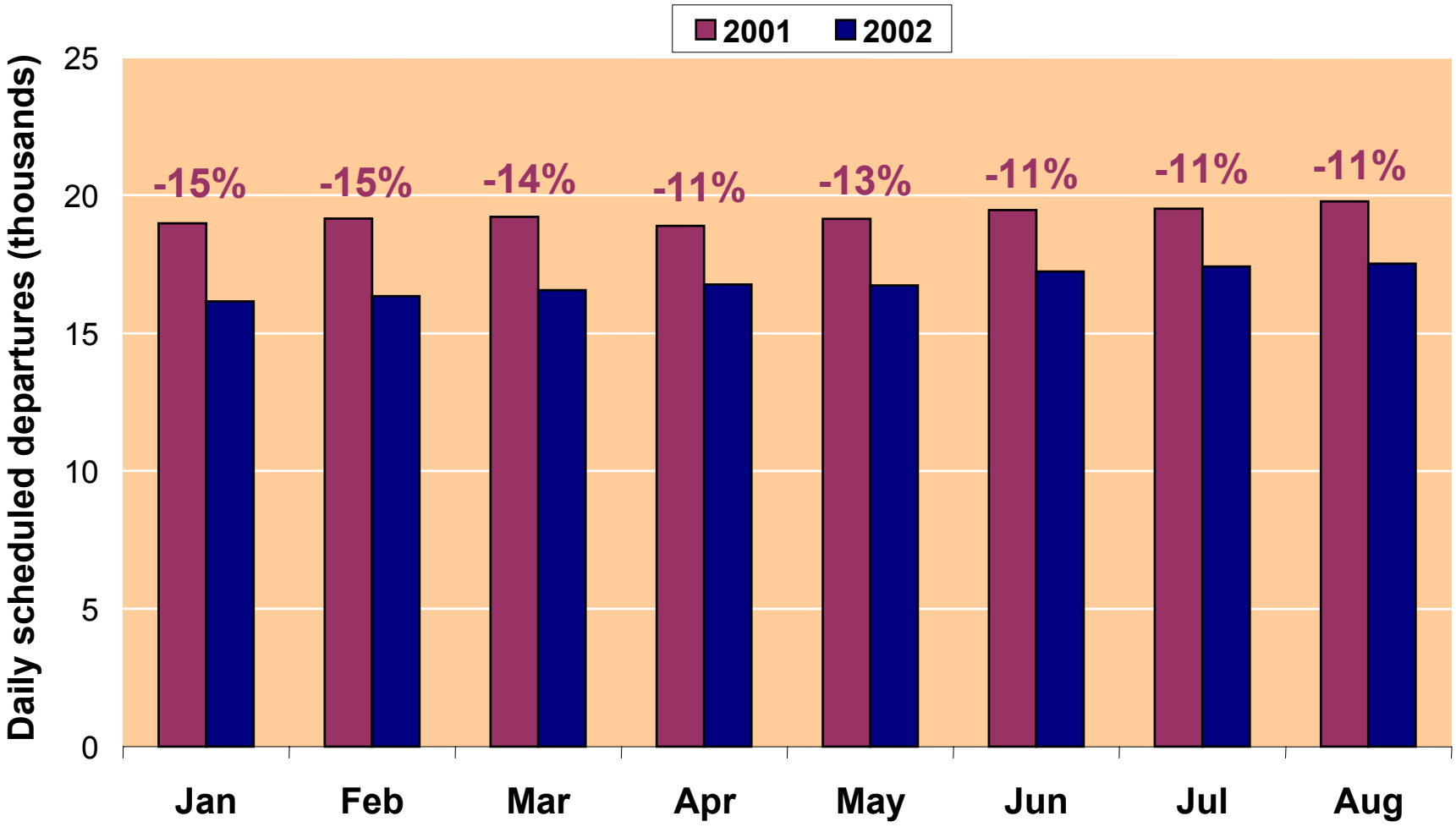


OPSNET, Jan '99 - Nov '02, thousands

TMS Delays by Source

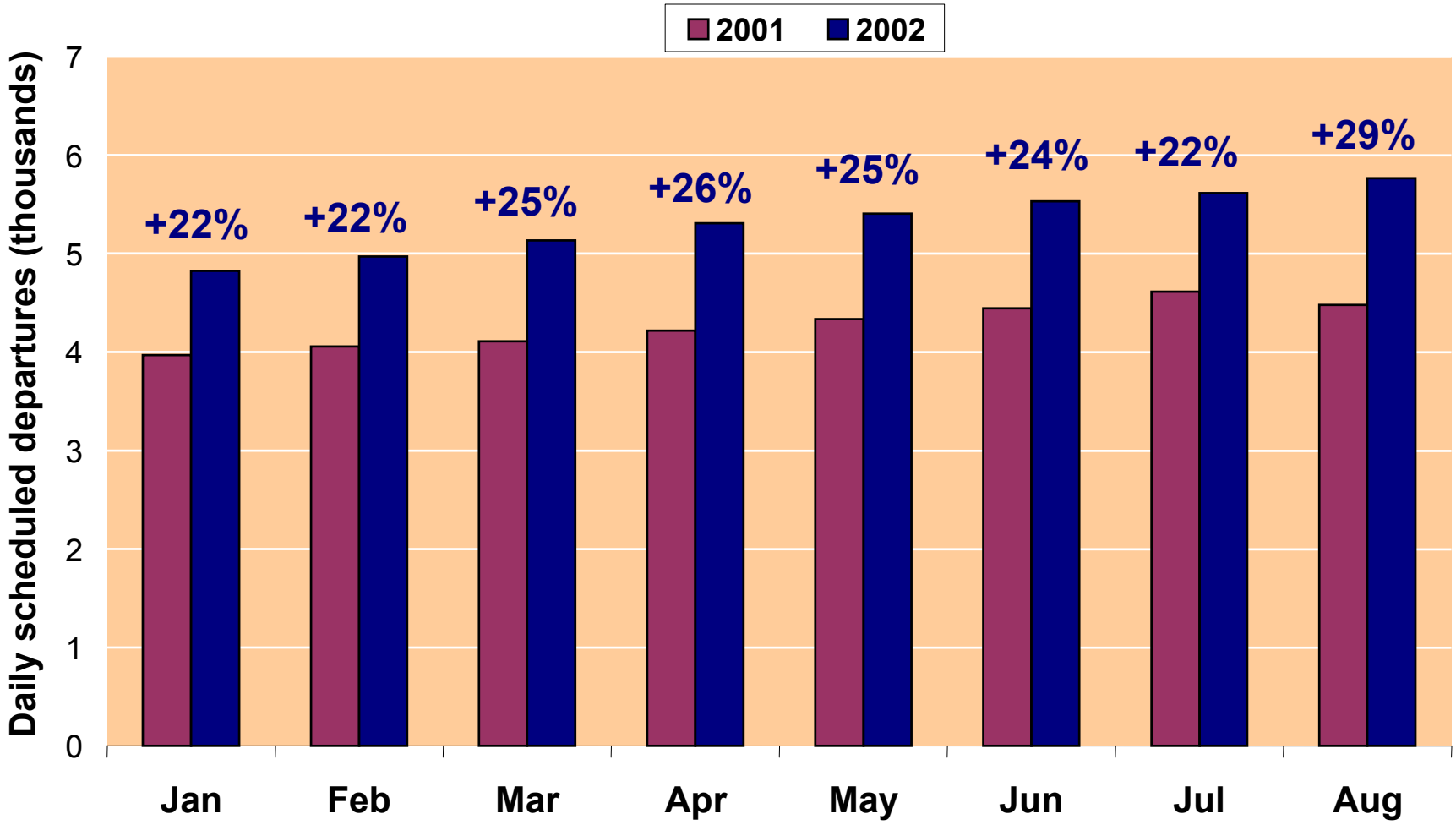


US Scheduled Departures by 'Large Jets'



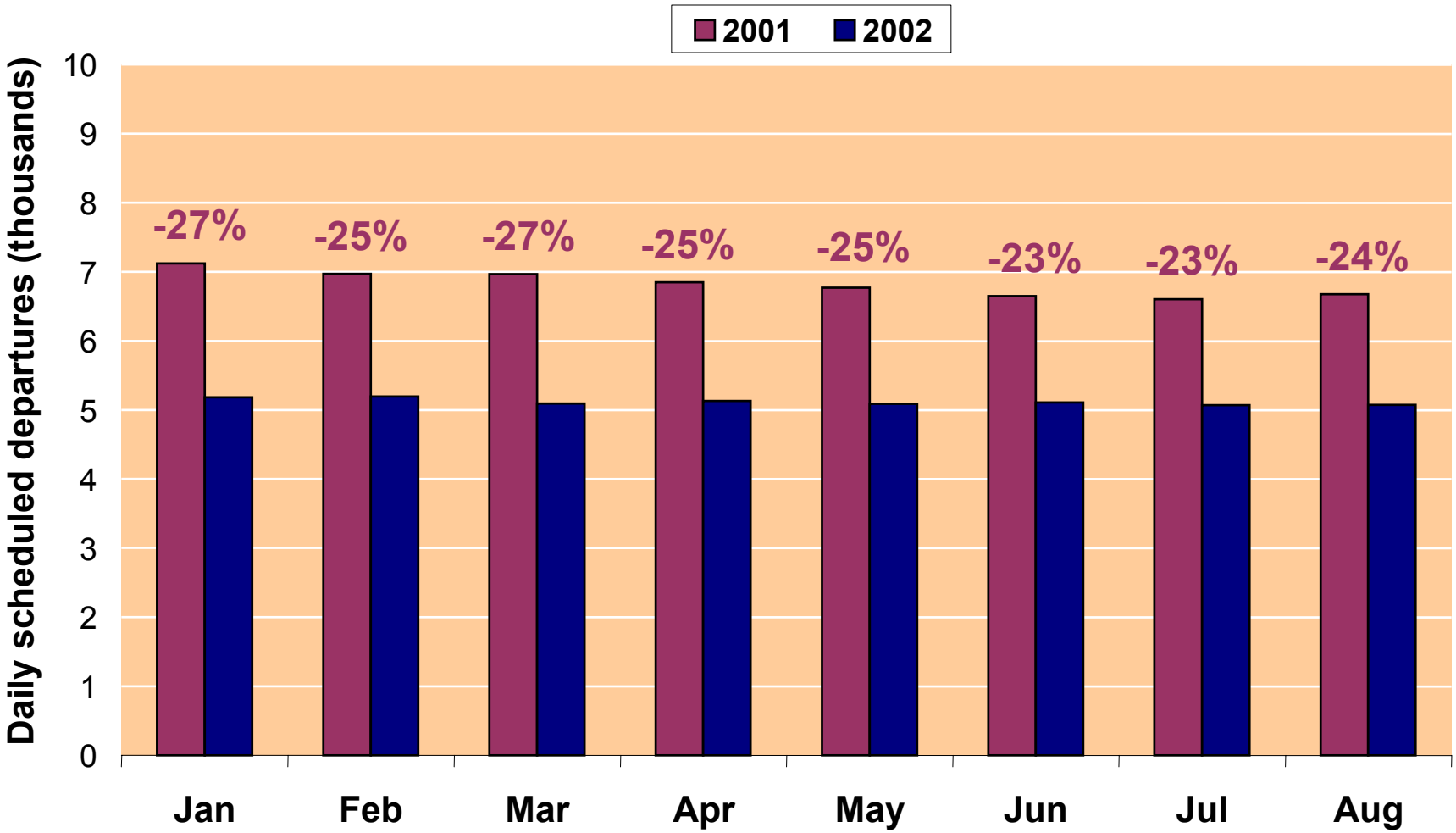
OAG, 285 airports, B717, B727, A310, DC9, MD80, etc

US Scheduled Departures by 'Regional Jets'



OAG departures by BA46 CARJ, CRJ1, D328, E145, F28

US Scheduled Departures by 'Turbo Props'



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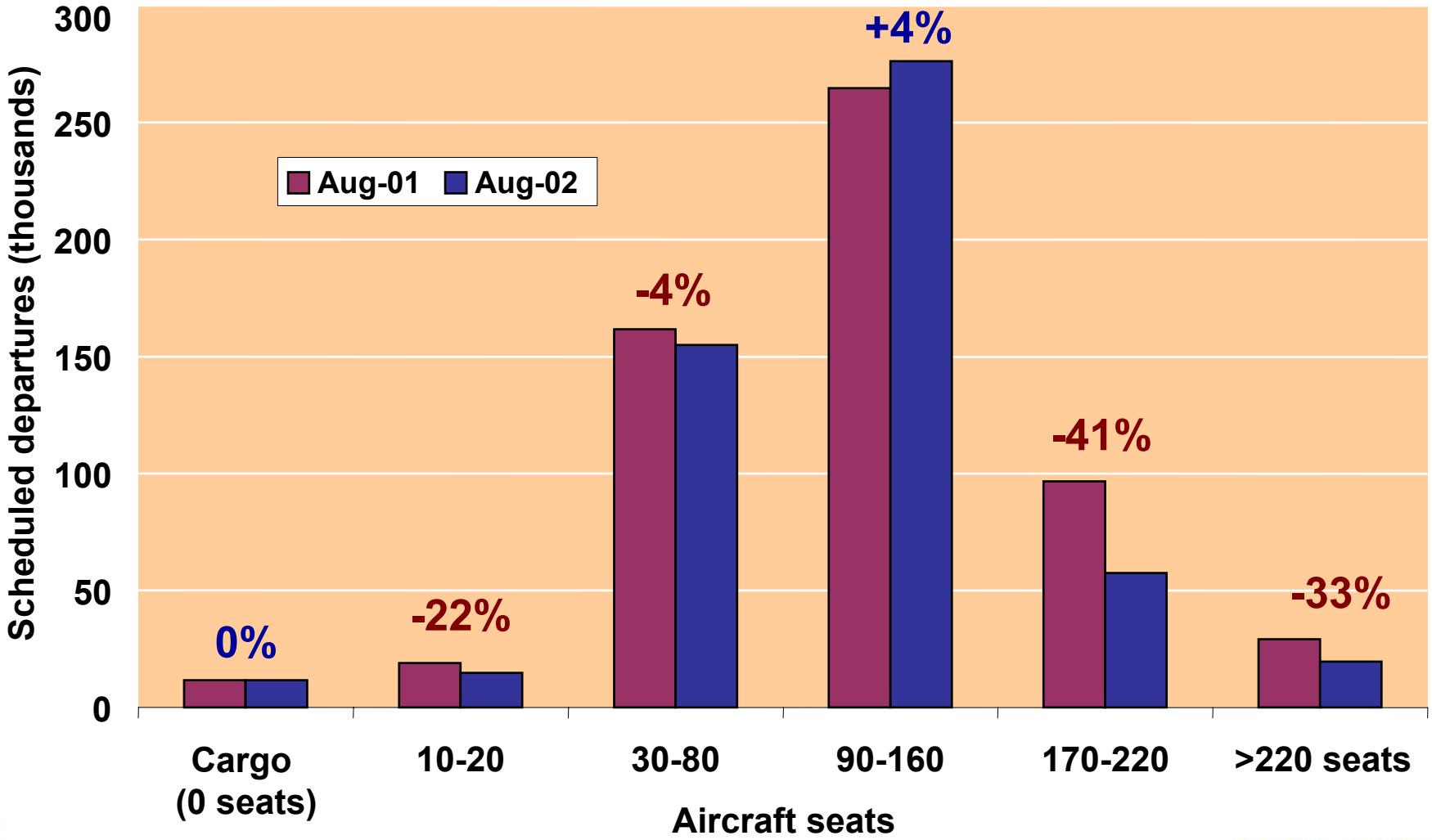
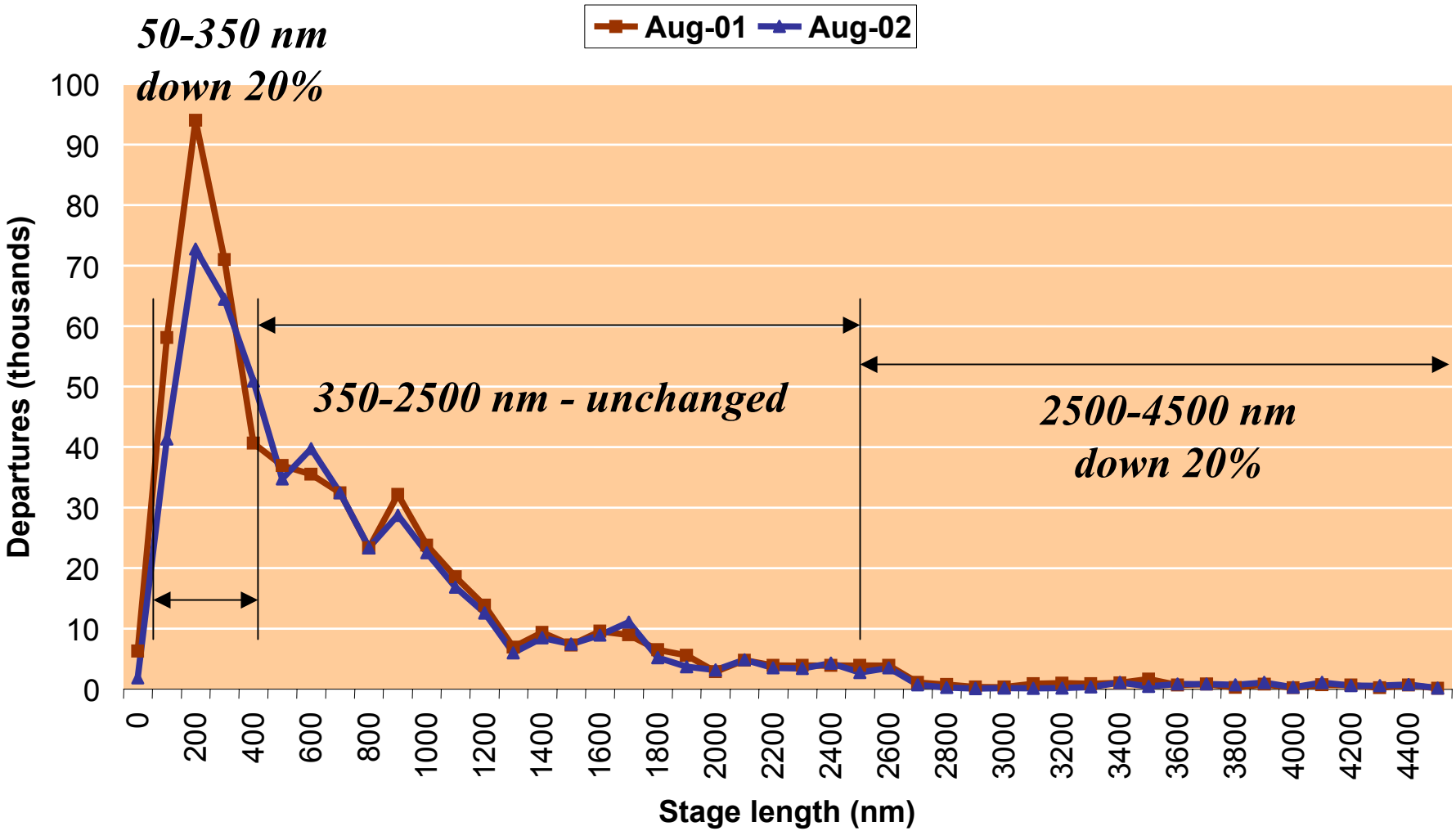
OAG departures from 285 airports

Scheduled Operations Down 8%



OAG, 34 airports, Aug 02 vs Aug 01

Fewer Short Flights, Fewer Long Flights



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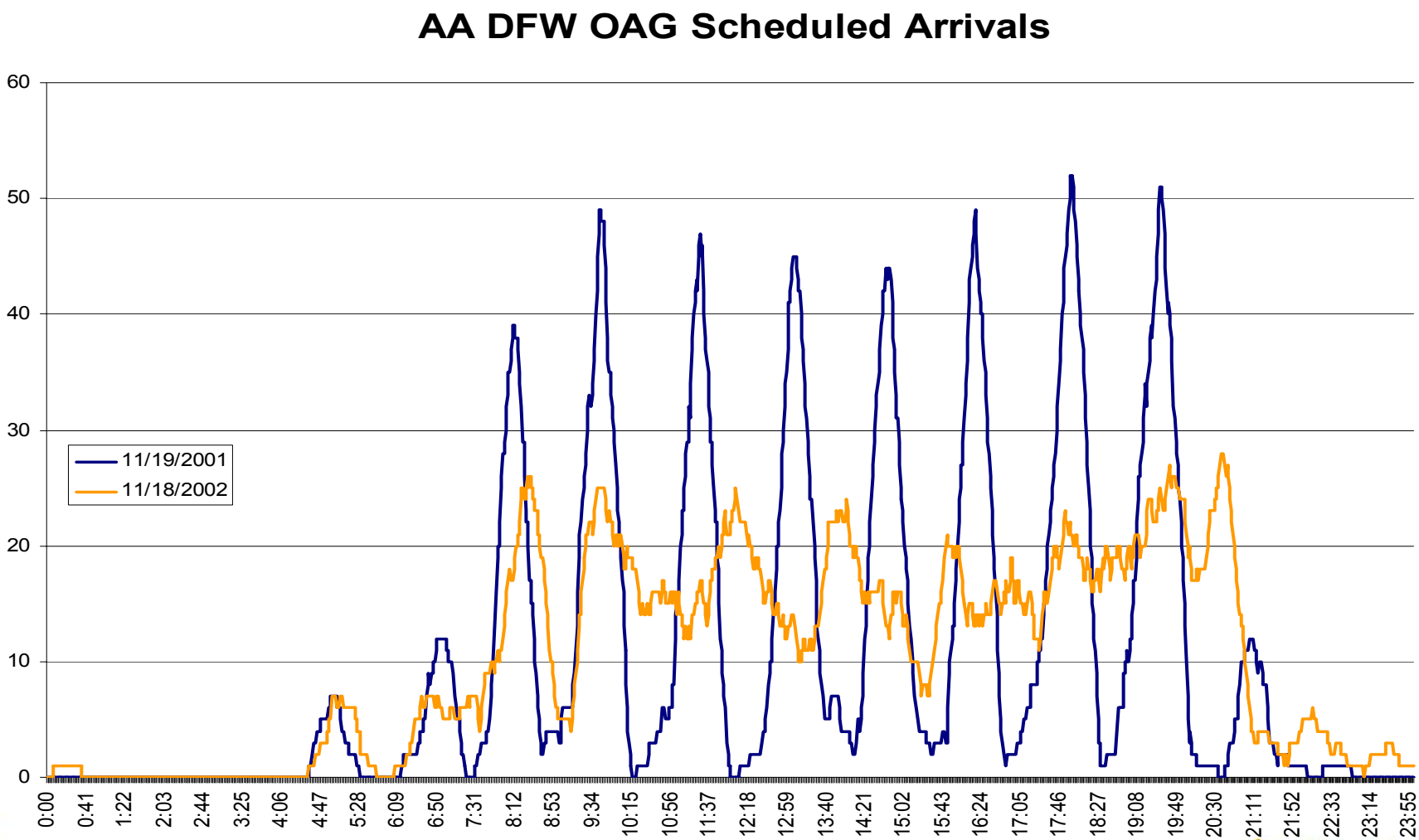
OAG, 34 airports, Aug 02 vs Aug 01

Rolling Hubs Dramatically Change the Daily Demand Profile



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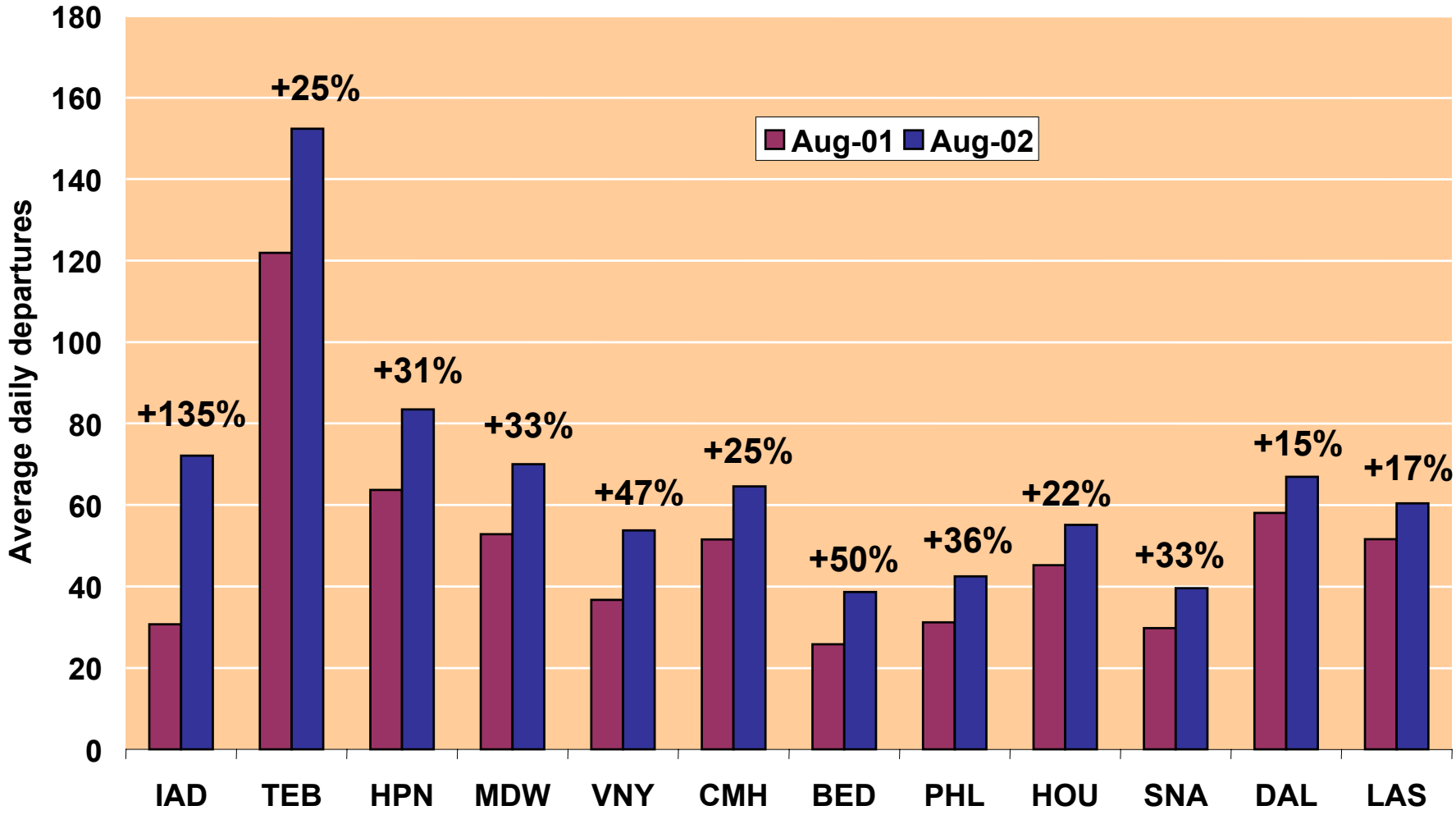
Business Jet Flights at Selected Airports



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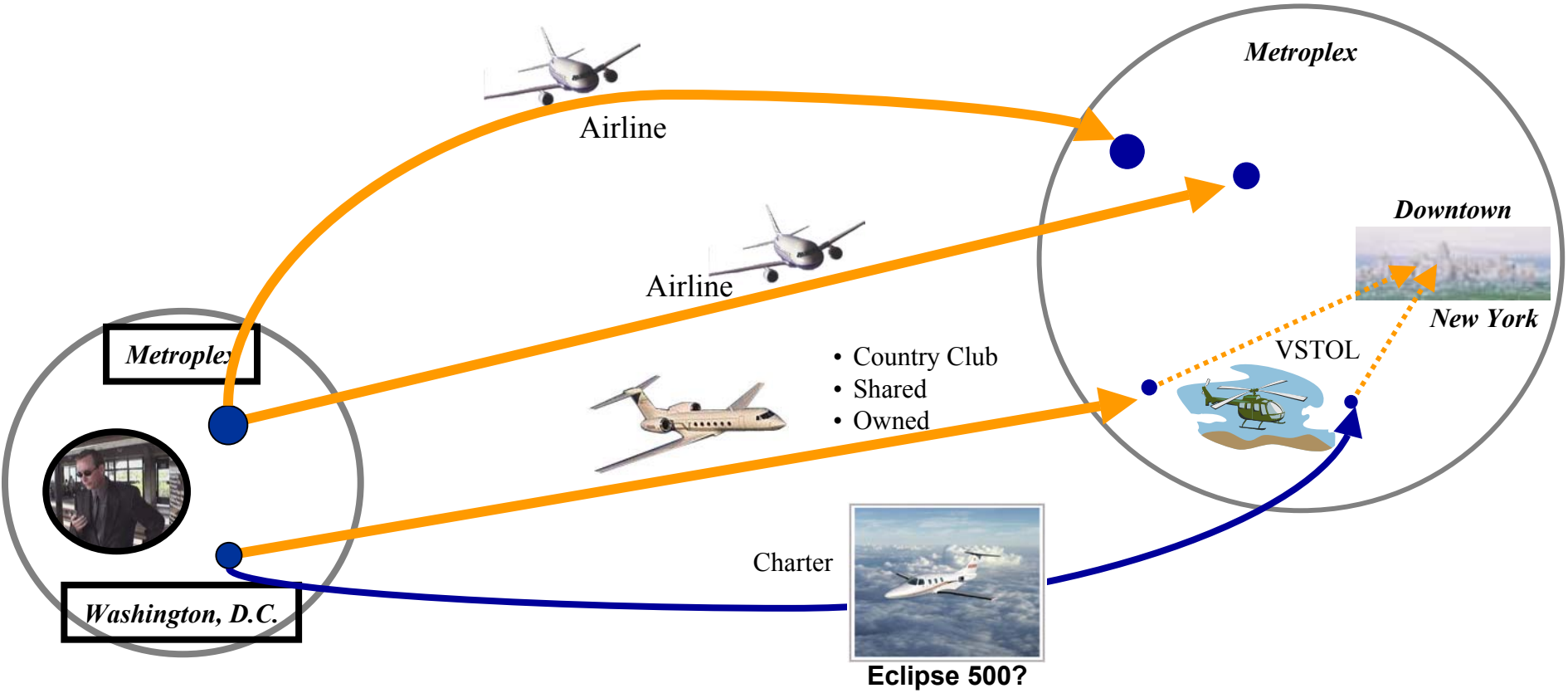
ETMS

Travelers Select From a Portfolio of Flight Options and Prices Resulting in a Different Traffic Mix, Load and Complexity



- Hub airports (30)
- Spoke airports (317)*
- Satellite airports ** (194)*

* With lighted runways longer than 5500 ft most with a tower

** Within 50 nmi off a hub airport

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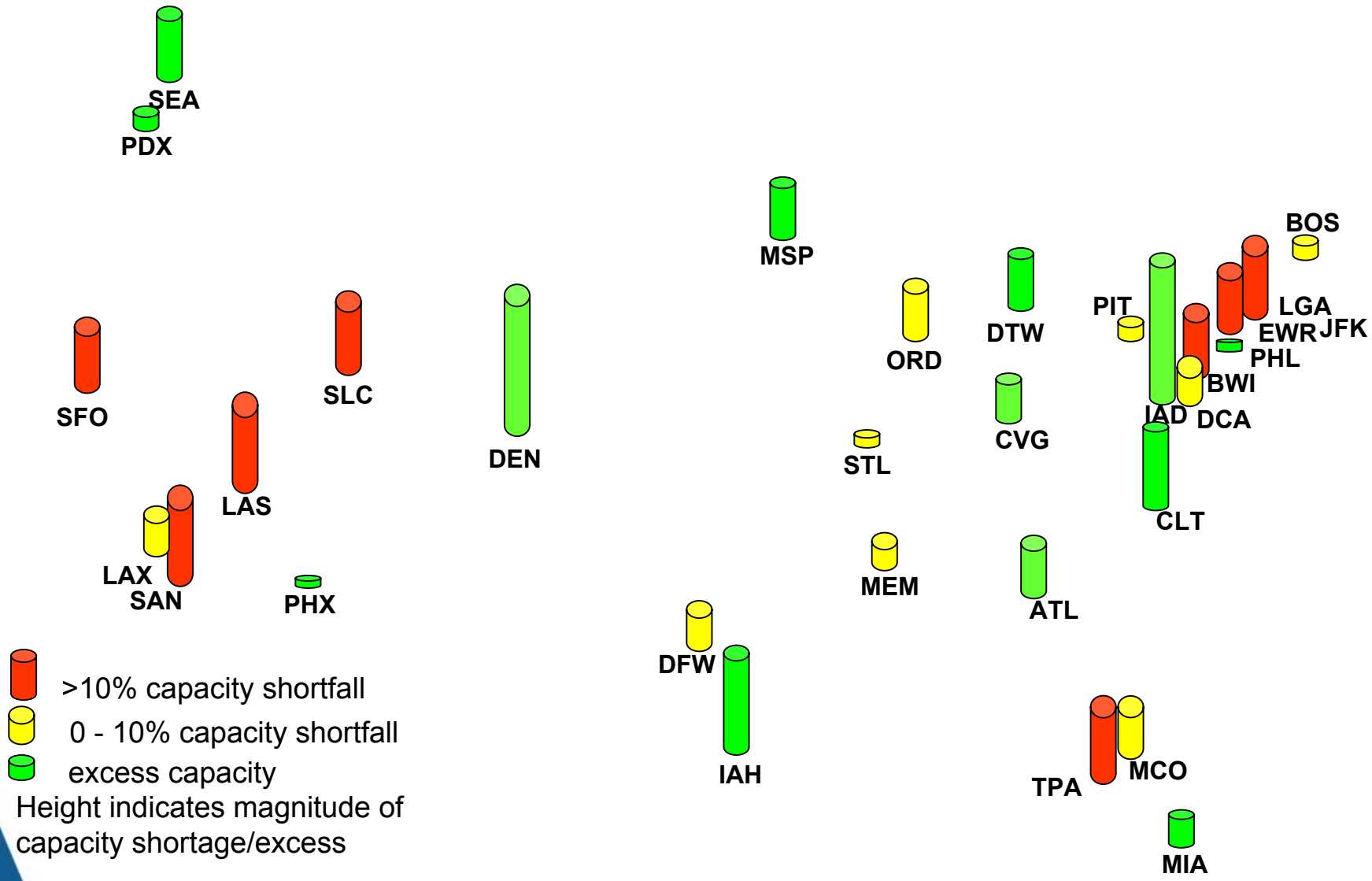
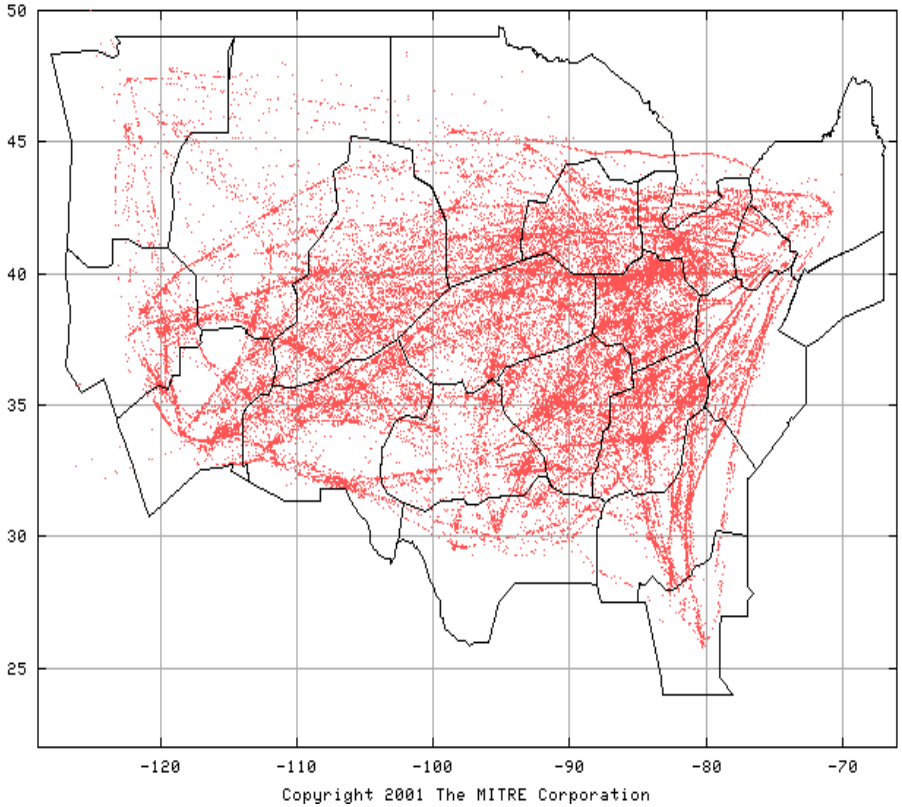
Agenda

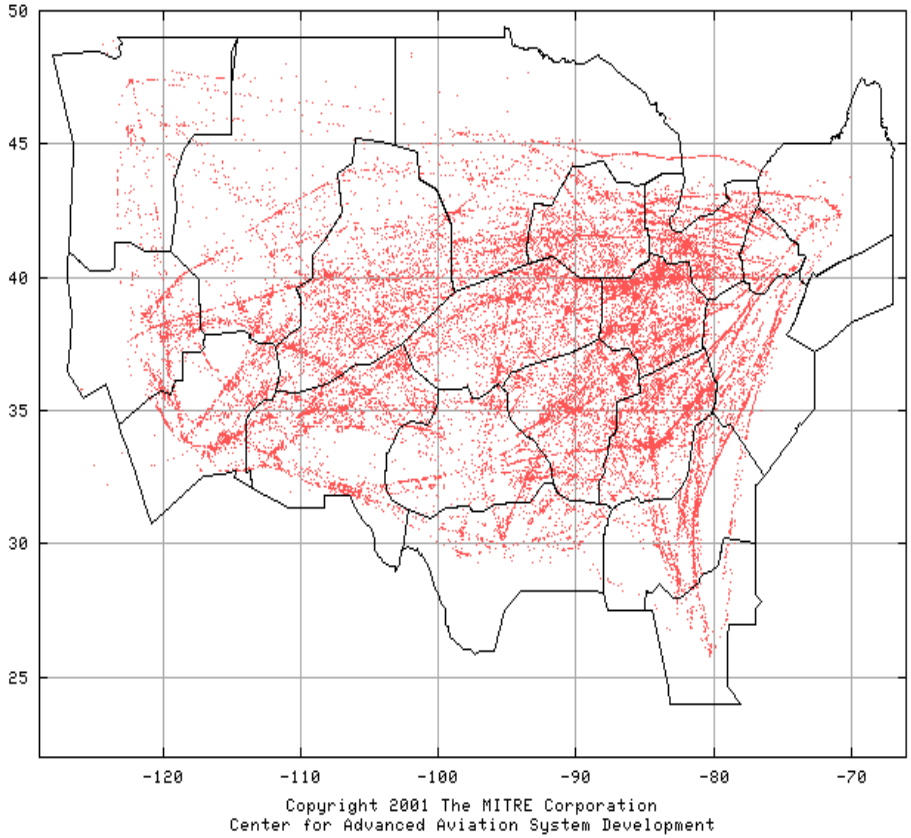
- NAS Performance and Traffic Trends
- Status of the OEP Version 4.0 (12/01)
  - Implemented FFP1 Automation Tools
  - Resolved Airspace Chokepoints
  - Implementing RNAV Routes
  - Opened New Detroit Runway
  - Completed Critical WAAS Stability Test
  - Implemented Data Link B1 in Miami
  - Significant Airspace Modeling and Redesign
- Emphasis for OEP Version 5.0 (12/02)

Capacity Increases Should be Targeted



Airspace Redesign and Reduced Vertical Separation Minima *(Scheduled Start Jan 2005)*





30 to 40 percent reduction in interactions between flights requiring controller intervention

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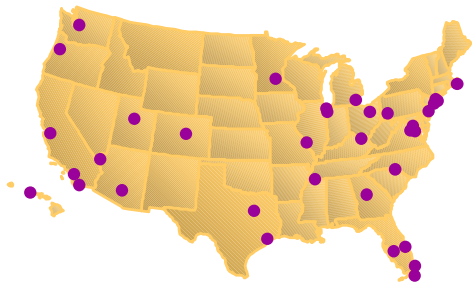
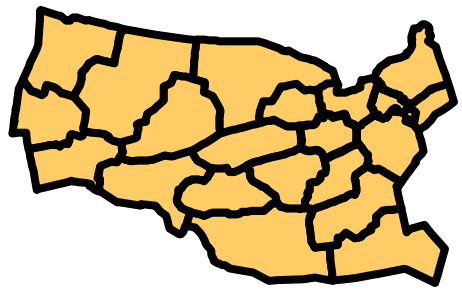
National Airspace Redesign

Primary means of the FAA to modernize US airspace by migrating from constrained ground-based navigation to the freedom of an RNP RNAV satellite-based system

- **Optimize & redesign local airspace targeting congested areas …**
  - **Focused on key airports and associated airspace; changes in arrival and departure routes drive change up into en route airspace**



- **Redesign national airspace …**
  - **By using new technology and airspace concepts, balance flexibility and structure to obtain maximum system efficiency**



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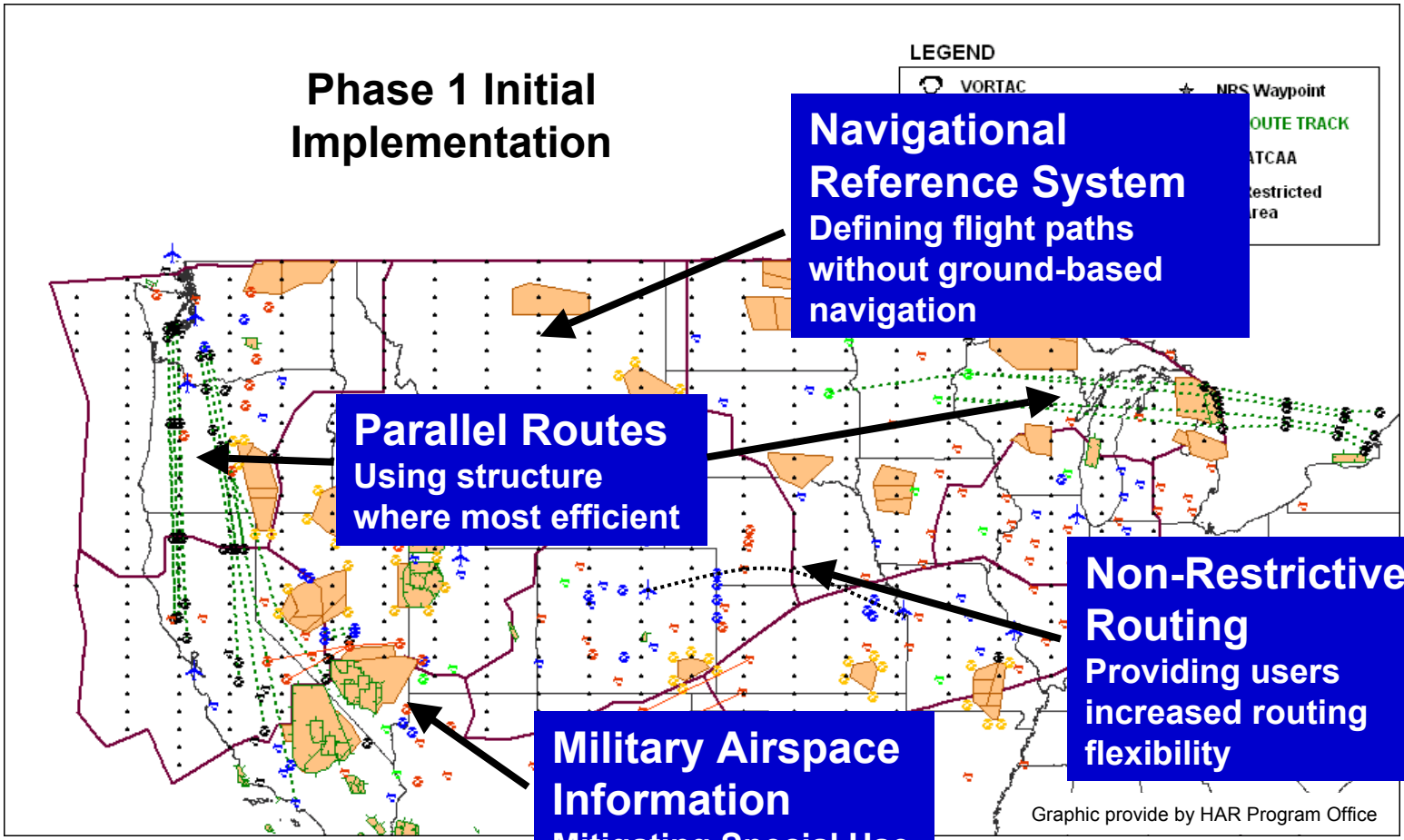
High Altitude Redesign Phase 1: Operational Changes



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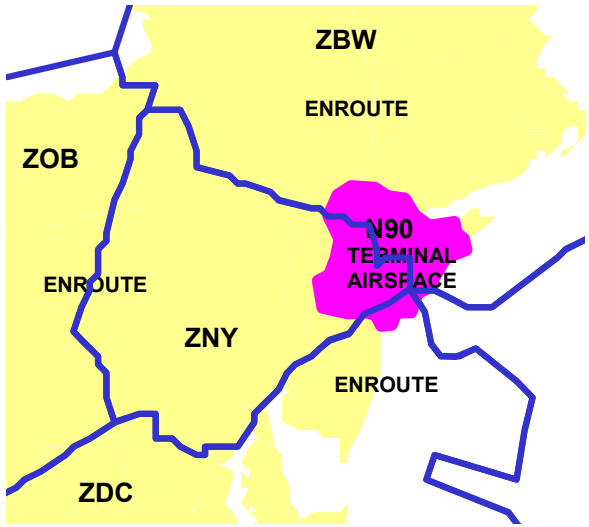
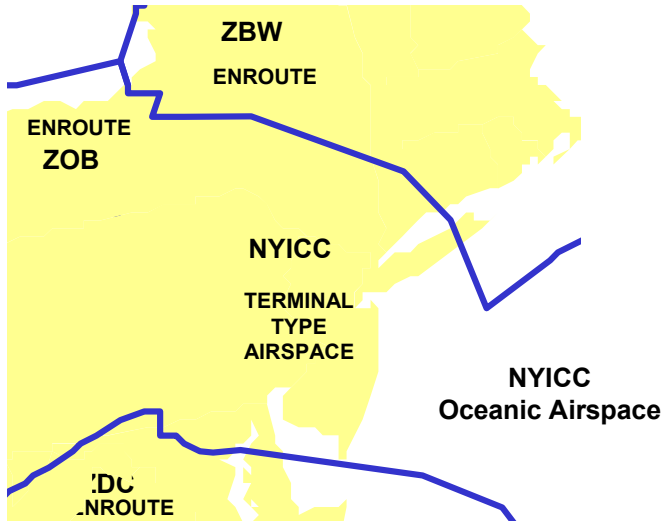
New York Integrated Control Complex

Exploring the integration of the New York terminal and en route air traffic control functions, personnel, and facilities



Existing Airspace

- Minor modifications to today's routes
- Static airspace is fragmented among several facilities
- Arrival routes essentially the same
- Some additional departure routes



Integrated Airspace

- Significant redesign of routes based on expanded airspace
- Unified, flexible airspace
- Simplified arrival routing
- More additional departure routes

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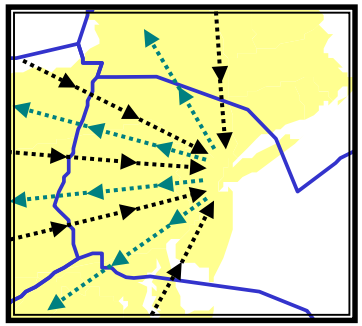
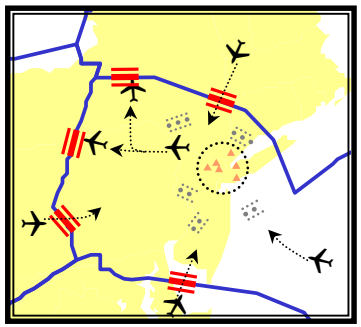
New York Integrated Control Complex Benefits - $ 150 M



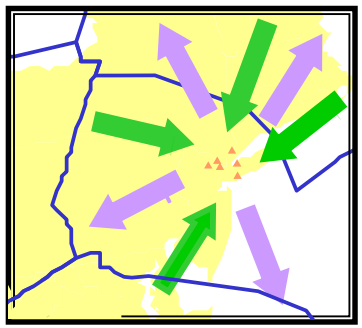
NYICC

- Optimal routing
- Flexible airspace management
- Terminal holding, when needed



NYICC

- Seamless integration between approach controls and en route airspace



NYICC

- Additional departure points
- Arrival areas
- Increased use of terminal separation

- Two additional arrivals in 50 minute period
- Reduction in number and duration of holds
  - Projected dollar savings: $6M/year
- Smoother flows and increased throughput

- Total minute savings: 1.5M minutes/year
- Total dollar savings: $49M/year

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Agenda

- NAS Performance and Traffic Trends
- Status of the OEP Version 4.0 (12/01)
- Emphasis for OEP Version 5.0 (12/02)
  - Commitment to RNP 0.3/2/2
  - Airspace Redesign
  - Enhanced Information Sharing (CDM)
  - Improved weather information
  - ADS-B based procedures
  - Surface Movement
  - Closely Spaced Parallel Procedures
  - Crossing Runway Procedures

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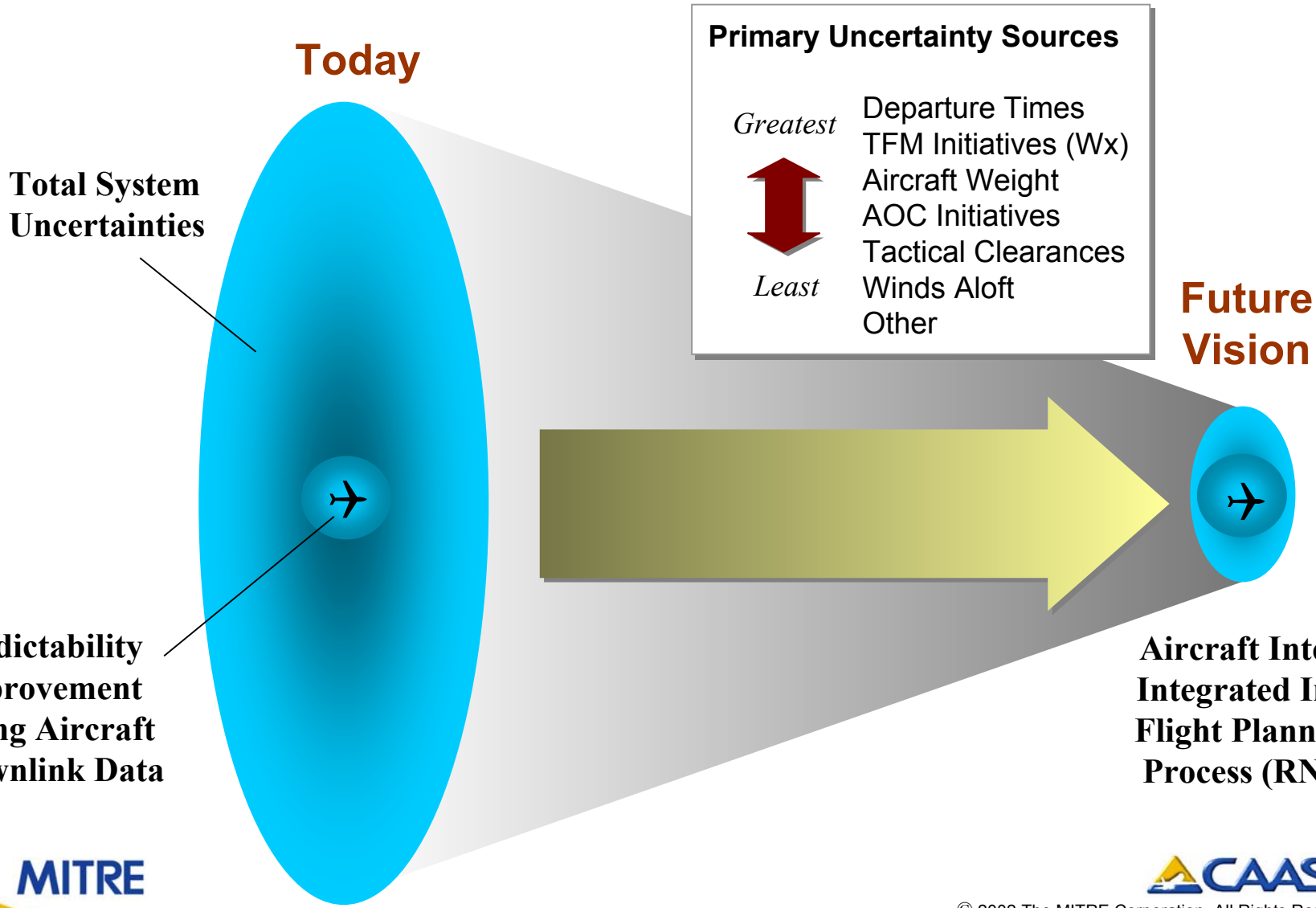
Remove Restrictions, Reduce Uncertainty

RNP is The Vision!



Required *System* Performance: Enabling the Future….Including Harmonization

Performance Criteria

Procedures & Training

Aircraft Capability

Digital Comm.

Airspace & Automation

Surveillance

Navigation Grid

Thank You!